WHAT IS CLAIMED IS:

1. A clamping device for injection molding machine, comprising:

a movable mold holder having a first side coupled to a mold;

a guiding unit fixed on a platform of the injection molding machine for guiding the movable mold holder mounted thereon to move in linear motion;

a screw rod unit having one end coupled to a second side of the movable mold holder, the screw rod unit penetrating and engaging to a gear wheel member in such a way that a rotation of the gear wheel member drives the screw rod unit to move in linear motion, and the gear wheel member has a second engaging part

a transmission unit for transmitting power of a driving source to the screw rod unit;

a first clamping unit pivoted on one side of the screw rod unit away from the movable mold holder and coupled to a engaging unit having a third engaging part, so that the first clamping unit drives the third engaging part to engage to/disengage from the a second engaging part outside the gear wheel member; and

a second clamping unit pivoted on the first clamping unit for driving a third engaging part of the first clamping unit, such that the third engaging part engages to the second engaging part to generate a rotational torque for driving the gear wheel member and actuating the screw rod unit to engage in a pressure clamping movement for clamping; the engagement between the third engaging part and the second engaging part is relieved, and the driving source is reversed to actuate the screw rod unit such that the screw rod unit drives the movable mold holder and the mold for opening the mold.

2. The clamping device for injection molding machine as claimed in claim 1, wherein the guiding unit further comprises a sliding track and a sliding seat.

3. The clamping device for injection molding machine as claimed in claim 1, wherein the screw rod unit is a large lead screw rod.

4. The clamping device for injection molding machine as claimed in claim 1, wherein the screw rod unit shares the same axis of rotation as the gear wheel member.

5. The clamping device for injection molding machine as claimed in claim 1, wherein the screw rod unit is a hollow tube structure.

6. The clamping device for injection molding machine as claimed in claim 5, wherein a projection unit is formed in the hollow tube structure.

7. The clamping device for injection molding machine as claimed in claim 6, wherein the projection unit is actuated by a unit capable of moving in reciprocating motion.

8. The clamping device for injection molding machine as claimed in claim 6, wherein the projection unit is a rod member.

9. The clamping device for injection molding machine as claimed in claim 1, wherein the first engaging part includes structures for engaging to threads of the screw rod unit.

10. The clamping device for injection molding machine as claimed in claim 1, wherein the second engaging part is on selected from a group consisting of a gear wheel, a friction wheel, and a pulley.

11. The clamping device for injection molding machine as claimed in claim 1, wherein the transmission unit further comprises an active wheel, a passive wheel, and a transmission piece.

12. The clamping device for injection molding machine as claimed in claim 11, wherein the transmission unit is selected from a group consisting of a timing belt, a chain, and a gear.

13. The clamping device for injection molding machine as claimed in claim 1, wherein the driving source is a motor

14. The clamping device for injection molding machine as claimed in claim 1, wherein the driving source is coupled to top of the bearing seat of the platform so as to drive the screw rod moving in reciprocating motion.

15. The clamping device for injection molding machine as claimed in claim 1, wherein the first clamping unit is driven by a unit capable of moving in reciprocating motion.

16. The clamping device for injection molding machine as claimed in claim 1, wherein the engaging unit is fixed on the first clamping unit, such that the gear wheel member moves in reciprocating motion when an air pressure cylinder drives the first clamping unit for engaging the engaging member to the second engaging part of the gear wheel member.

17. The clamping device for injection molding machine as claimed in claim 1, wherein the third engaging part includes structures that correspond to the second engaging part.

18. The clamping device for injection molding machine as claimed in claim 1, wherein the third engaging part is one selected from a group consisting of a gear rack, a friction board, and a flat line belt.

19. The clamping device for injection molding machine as claimed in claim 1, wherein the first clamping unit and the engaging member are pivoted freely to a sliding member.

20. The clamping device for injection molding machine as claimed in claim 19, wherein the sliding member is selected from a group consisting of a sliding track, a linear bearing, and units capable of moving in linear motion.

21. The clamping device for injection molding machine as claimed in claim 1, wherein the second clamping unit is fixed on a vertical side of the first clamping unit in such a way that the second clamping unit and the engaging part are driven to slide up and down on the sliding member.

22. The clamping device for injection molding machine as claimed in claim 1, wherein the second clamping unit is a unit capable of moving in reciprocating motion.

23. The clamping device for injection molding machine as claimed in claim 1, wherein the screw rod unit penetrates the first engaging part of the gear wheel member.